

REMARKS

Applicants thank the Examiner for the very thorough consideration given the present application. Claims 1, 3, 4 and 9-22 and 24-28 are now pending in the present application. Claims 1, 10, 13 and 18 are independent. Reconsideration of this application is respectfully requested.

Failure to Treat Claim 22 on the Merits

Claim 22 is listed in the Office Action Summary form (PTOL-326) as being rejected, but the body of the rejection does not contain any rejection of claim 22. Applicants respectfully submit that it was improper for the Examiner to state on the Office Action Summary that claim 22 is rejected, but to nowhere discuss how claim 22 is rejected in any of the four rejections under 35 U.S.C. §103.

It is impossible for Applicants to understand from the Office Action whether claim 22 is actually rejected, or whether it is instead allowable. Further, if claim 22 is being rejected, it cannot be ascertained which references are being applied to reject claim 22. Therefore, Applicants cannot properly respond to a rejection which does not set forth the section of the law and the references being applied in the rejection. Accordingly, an Office Action on the merits with respect to claim 22 is respectfully requested.

Applicants note that no amendments have been made to claim 22, or to independent claim 1 from which claim 22 directly depends, in this Reply.

Therefore, any new rejection of claim 22 in the next Office Action cannot properly be made final. However, it should be unnecessary to consider this point because independent claim 1, from which claim 22 depends, is believed to be allowable.

Information Disclosure Statement

Applicants filed an Information Disclosure Statement on January 10, 2006, citing three references, one of which, WO 93/17169, has been cited and applied in the outstanding Office Action. Applicants thank the Examiner for reviewing this Information Disclosure Statement and for providing Applicants with an initialed copy of the form PTO/SB/08a/b filed therewith.

Rejections Under 35 U.S.C. § 103

Claims 1, 3, 4, 19, 20 and 21

Claims 1, 3, 4, 19, 20 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,282,928 to Fukumoto et al. ("Fukumoto") in view of either European Patent document 0 485 700 (EPO '700), or U.S. Patent 3,012,333 to Leonard. This rejection is respectfully traversed.

During patent examination the PTO bears the initial burden of presenting a *prima facie* case of unpatentability. In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444(Fed. Cir. 1992); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788(Fed. Cir. 1984). This burden can be satisfied when the PTO

presents evidence, by means of some teaching, suggestion or inference either in the applied prior art or generally available knowledge, that would have appeared to have suggested the claimed subject matter to a person of ordinary skill in the art or would have motivated a person of ordinary skill in the art to combine the applied references in the proposed manner to arrive at the claimed invention. See Carella v. Starlight Archery Pro Line Co., 804 F.2d 135, 140, 231 USPQ 644, 647 (Fed. Cir. 1986); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); In re Rinehart, 531 F.2d 1048, 1051-1052, 189 USPQ 143, 147 (CCPA 1976).

If the PTO fails to meet this burden, then the applicants is entitled to the patent. However, when a *prima facie* case is made, the burden shifts to the applicant to come forward with evidence and/or argument supporting patentability. Patentability *vel non* is then determined on the entirety of the record, by a preponderance of evidence and weight of argument, In re Ochiai, cited above.

A prior art reference anticipates the subject matter of a claim when that reference discloses every feature of the claimed invention, either explicitly or inherently. In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) and Hazani v. Int'l Trade Comm'n, 126 F.3d 1473, 1477, 44 USPQ2d 1358, 1361 (Fed Cir. 1997). While, of course, it is possible that it is inherent in the operation of the prior art device that a particular element operates as theorized

by the examiner, inherency may not be established by probabilities or possibilities. In re Oelrich, 666 F.2d 578, 581, 212 USPQ 323, 326 (CCPA 1981) and In re Rijckaert, 9 F.3d 1531, 1534, 28 USPQ2d 1955, 1957 (Fed. Cir. 1993).

What is alleged to be inherent must necessarily occur. The mere fact that something *may* result from a given set of circumstances is not sufficient. In re Oelrich, 212 USPQ 323, 326 (CCPA 1991). "Inherent anticipation requires that the missing descriptive material is 'necessarily present,' not merely probably or possibly present, in the prior art." Trintec Indus., Inc. v. Top-U.S.A. Corp., 295 F.3d 1292, 1295, 63 USPQ2d 1597, 1599 (Fed. Cir. 2002) (quoting In re Robertson, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999)).

Because the rejection is based on 35 U.S.C. § 103, what is in issue in such a rejection is "the invention as a whole", not just a few features of the claimed invention. Under 35 U.S.C. § 103, " [a] patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains." The determination under section 103 is whether the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made. See In re O'Farrell, 853 F.2d 894, 902, 7 USPQ2d 1673, 1680 (Fed. Cir. 1988). In determining obviousness, the Examiner must explain what the differences between the claimed invention and

the prior art are and provide objective factual evidence to support a conclusion that it would be obvious to one of ordinary skill in the art to achieve the claimed invention, which includes those missing features.

In the second place, in rejecting claims under 35 U.S.C. § 103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a *prima facie* case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner

suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification. In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be suggested or taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words in a claim must be considered in judging the patentability of that claim against the prior art. In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970).

A showing of a suggestion, teaching, or motivation to combine the prior art references is an “essential evidentiary component of an obviousness holding.” C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not “evidence.” See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617 (Fed. Cir. 1999).

Moreover, it is well settled that the Office Action must provide objective evidence of the basis used in a prior art rejection. A factual inquiry whether to modify a reference must be based on objective evidence of record, not merely conclusory statements of the Examiner. See, In re Lee, 277 F.3d 1338, 1343, 61 USPQ2d 1430, 1433 (Fed. Cir. 2002).

Claim 1 positively recites a combination of features including wherein the one circulation duct has a plurality of grooves with helical configurations provided at an inner wall surface thereof for prolonging a heat exchange time period of the hot and humid air by reducing the flow speed of water along the inner walls of the circulation duct. However, this feature is not shown in any of the three applied references, either explicitly or inherently.

In an attempt to remedy this clear deficiency in all applied references, the Office Action turns to Applicants' own disclosure against Applicants. In this regard, the Office Action, on page 3, states: "Fig. 2 shows a cross-sectional view of the circulating duct according to one embodiment of the present invention. As shown, preferably, the circulation duct has a plurality of grooves or indentations 20a on its inner walls for prolonging heat exchange time period of the hot humid air by reducing the flow speed of the water along the inner walls of the circulation duct. However, the shape, form or configuration of the inner walls of the circulation duct is not limited to such, but may be of any shape or form that can reduce the water flow speed along the inner walls of the circulation duct 20. For example, as shown in (Applicants') Fig. 3, the circulation duct may have helical grooves 20b formed on the inner walls of the circulation duct 20, which reduces a flow speed of the water flowing down from the upper part of the circulation duct 20. This improves a dehumidifying efficiency of the washing machine 20."

Applicants respectfully submit that this attempt by the Office to base a rejection of Applicants' claims using Applicants' own disclosure as a blueprint for piecing together the prior art to defeat patentability is proscribed by case law and practice and is completely improper. In this regard, applicants respectfully direct the Office's attention to the Dembiczak case, cited above, where the court admonished the Office against using an inventor's own disclosure against him in the context of a section 103 obviousness determination requiring "the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field." 175 F.3d at 999, 50 USPQ2d at 1617 (citing W.L. Gore & Assocs., Inc. v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984)). The problem with combining references using hindsight to render a claimed invention obvious is that it "simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability." Id. This hindsight re-creation in the context of obviousness determinations is wholly improper.

Furthermore, a rejection based on Section 103 must rest on a factual basis, with the facts being interpreted without hindsight reconstruction of the invention from the prior art. In making this evaluation, the Examiner has the initial duty of supplying the factual basis for the rejection advanced. The Examiner may not, because of doubts that the invention is patentable, resort to speculation,

unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis, See, In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). This rejection is based solely on speculation that is not supported by any objective factual evidence in any of the applied references, and it is well settled that a rejection under 35 U.S.C. § 103 cannot properly be based on speculation but must be based on objective factual evidence of record. See, In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968). See, also, In re GPAC, Inc., 35 USPQ2d 1116 at 1123 (Fed. Cir. 1995) and Ex parte Haymond, 41 USPQ2d 1217 at 1220 (Bd. Pat. App. & Int. 1996).

Accordingly, this rejection, which is grounded on improper hindsight reconstruction of Applicants' invention, is fundamentally improper and must be withdrawn.

Nevertheless, in order to be fully responsive to all of the grounds of rejection, Applicants provide the following comments.

EP'700 discloses a washing machine including a nozzle 11 spraying water into a duct 5, and a plurality of meshes 12 which are projected from an inner surface of the duct 5. The water sprayed into the duct 5 runs on an upper surface of the meshes 12 and then drops from the end of the meshes 12 to an inner space of the duct 5 many times while the air blows from a lower part of the duct 5 toward an upper part of the duct 5. During a drying process, a part of the water

which is sprayed from the nozzle 11 and which drops from the end of the meshes 12 is blown by the air passing through the duct 5 and then goes into a tank 2 with the air, and thereby the drying efficiency decreases.

Leonard discloses a washing machine including a conduit 43 spraying water into a conduit 17, and a plurality of flanges 23 and 24 which are projected from an inner surface of the conduit 17. This configuration of Leonard is similar to that of EP'700, and thus Leonard has the same deficiency as that of EP'700.

As explained above, EP'700 and Leonard have the deficiency that a part of the water supplied to the duct 5 or conduit 17 by nozzle 11 or conduit 43 can be introduced to a tub, and this deficiency makes a drying efficiency of EP'700 and Leonard decrease.

On the contrary, claim 1 clearly recites, among other features, "a water supplying duct for supplying external water to an upper part of the inside of an inner wall of the at least one circulation duct ... primarily by flowing down the inner wall..." and "the one circulation duct has a plurality of grooves with helical configurations provided at an inner wall surface thereof...", and thereby the water supplied to the circulation duct by the water supplying duct slowly flows down on the inner wall of the circulation duct along the helical grooves. Therefore, the water supplied to the circulation duct is not blown by the air passing through the circulation duct and does not go into a tub. Accordingly, the apparatus of claim 1 can provide a high drying efficiency compared to the cited references.

Applicants also respectfully submit that the outstanding Office Action fails to provide objective factual evidence that EP '700's disclosure of a duct comprising a plurality of grids, arranged in a cascade, to facilitate the forming of films of water and thus effectively trap the lint and allow an easy cleaning of the duct, as disclosed in the Abstract of this reference, renders the claimed invention including the recited helical groove feature obvious. The plurality of meshes 12 involve a complicated multi-element structure, whereas Applicants' claimed helical grooves have a simpler, more unitary structure, and such simple, unitary structural features are neither disclosed nor suggested by EP '700's complicated, unwieldy mesh structure.

Similarly, Leonard's use of plural baffle flanges 23 and 24 involve a plurality of complicatedly shaped multi-element structure whereas Applicants' claimed helical grooves constitute a simple, unitary structure, and such simple, unitary structural features are neither disclosed nor suggested by Leonard's complicatedly shaped, unwieldy flanged baffle structures.

Moreover, Applicants' claimed invention has significant structural advantages over any of the applied art, including a helically grooved body that can readily be formed as a unitary body to achieve cost savings associated with construction of the claimed invention as compared to complicated multiple element devices such as those disclosed by EP '700 or Leonard.

Another advantage of the claimed invention is that the water supplied to the circulation duct along the claimed helical grooves is not blown by air passing through the circulation duct and does not go into a tub, thereby providing a relatively higher drying efficiency as compared to the applied references.

Accordingly, the Office Action does not make out a *prima facie* case of obviousness of the claimed invention, and the claimed invention patentably defines over the applied art.

Accordingly, reconsideration and withdrawal of this rejection of claims 1, 3, 4, 19, 20 and 21 are respectfully requested.

Claims 9, 11 and 17

Claims 9, 11 and 17 stand rejected under 35 USC §103(a) as being unpatentable over the art applied in the rejection of claim 1, and further in view of WIPO '169. This rejection is respectfully traversed.

Initially, Applicants respectfully submit that claim 1, from which claims 9, 11 and 17 depend, is not rendered obvious by the art applied in the rejection of claim 1, and WIPO '169 is not applied to remedy the deficiencies in the reference combination applied in the rejection of claim 1.

Accordingly, even if one of ordinary skill in the art were motivated to modify the aforementioned reference combination used to reject claim 1, the resulting

modified version of that reference combination would neither suggest nor render obvious the claimed invention.

Reconsideration and withdrawal of this rejection of claims 9, 11 and 17 are respectfully requested.

Claim 12

Claim 12 stands rejected under 35 U.S.C. §103(a) as unpatentable over the prior art applied in the rejection of claim 1 and further in view of either U.S. Patent 5,277,210 to Kim or U.S. Patent 4,103,433 to Taylor. This rejection is respectfully traversed.

The base reference combination applied in this rejection does not render the claimed invention obvious for reasons stated above, and neither of the two secondary references applied in this rejection is used to remedy those deficiencies.

Accordingly, even if one of ordinary skill in the art were motivated to modify the aforementioned reference combination used to reject claim 1, the resulting modified version of that reference combination would neither suggest nor render obvious the claimed invention.

Accordingly, the Office Action does not make out a *prima facie* case of obviousness of the claimed invention recited in claim 12. Reconsideration and withdrawal of this rejection of claim 12 is respectfully requested.

Claim 10

Claim 10 stands rejected under 35 U.S.C. §103(a) as unpatentable over the art applied in the rejection of claim 1, and further in view of either U.S. Patent 3,216,126 to Brucken et al. ("Brucken") or U.S. Patent 3,402,576 to Krupsky. This rejection is respectfully traversed.

Claim 10, as amended, depends from claim 1, which recites a combination of features neither disclosed nor suggested by the applied art. These features include, for example, a water supplying duct for supplying external water to an upper part of the inside of an inner wall of the at least one circulation duct to dehumidify the air in the at least one circulation duct primarily by flowing down the inner wall from said upper part and coming in direct contact with air received in the circulation duct, and wherein the one circulation duct has a plurality of grooves with helical configurations provided at an inner wall surface thereof for prolonging a heat exchange time period of the hot and humid air by reducing the flow speed of water along the inner walls of the circulation duct.

For this reason alone, this rejection of claim 10 does not make out a *prima facie* case of obviousness of the claimed invention.

Moreover, neither of the secondary references discloses a condenser type washer with air used to cool a condenser tube.

So even if one of ordinary skill in the art were properly motivated to modify the base reference combination in view of either Brucken or Krupsky, the modified

version of the base reference combination would neither suggest or render obvious the claimed invention.

The Office Action also states that these features, i.e., the claimed external air supplying duct feature and external fan feature, would be obvious to provide to Brucken as "a mere extension/duplication of the teachings of Brucken (see MPEP 2144.04 REVERSAL, DUPLICATION OR REARRANGEMENT OF PARTS)."

Applicants respectfully are in complete disagreement with this aspect of the rejection. This rejection completely fails to provide any objective factual evidence of any motivation to provide the claimed external air supplying duct and external fan features, and instead, improperly relies on a "*per se*" rule of unpatentability. As pointed out above, the Federal Circuit has stated, in In re Ochiai, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995), that "reliance on *per se* rules of obviousness is legally incorrect and must cease."

For a *prima facie* case of obviousness to be established, the teachings from the prior art itself must appear to have suggested the claimed subject matter to one of ordinary skill in the art. See In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976). The mere fact that the prior art could be modified as proposed by the Examiner is not sufficient to establish a *prima facie* case of obviousness. See In re Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992). The Examiner must explain why the prior art would have suggested to

one of ordinary skill in the art the desirability of the modification. See Fritch, 972 F.2d at 1266, 23 USPQ2d at 1783-84.

The Office Action does not provide such an explanation, nor does it present objective factual evidence to support such a speculative conclusion.

Accordingly, the Office Action has not made out a *prima facie* case that claim 10 is obvious in view of the applied references. Reconsideration and withdrawal of this rejection of claim 10 is respectfully requested.

Allowed Subject Matter

Applicants acknowledge with appreciation the allowance of claims 13-16, 18 and 24-28.

CONCLUSION

All the stated grounds of rejection have been properly traversed and/or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently pending rejections and that they be withdrawn. Also, clarification of the status of claim 22 is respectfully requested.

It is believed that a full and complete response has been made to the Office Action, and that as such, the Examiner is respectfully requested to send the application to Issue.

Reply to Office Action dated May 2, 2006
Appl. No. 10/052,553

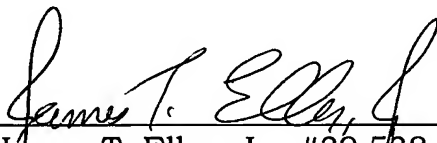
Art Unit 1746
Docket No. 0465-0838P

In the event there are any matters remaining in this application, the Examiner is invited to contact Robert J. Webster, Registration No. 46,472 at (703) 205-8076 in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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